



Worksheet 1 - Name: _____

(Answers on 2nd page of PDF)
The theorem states that the square of the hypotenuse is the sum of the squares of the legs. Always understand that the Pythagorean Theorem relates the areas of squares on the sides of the right triangle.

Use the Pythagorean Theorem to find the missing unit.

1.
 $S = 8.485$
2.
 $S = 13.929$
3.
 $S = 17.321$
4.
 $S = 14.866$
5.
 $S = 11.535$
6.
 $S = 21.564$
7.
 $S = 12.689$
8.
 $S = 14.422$
9.
 $S = 16.583$
10.
 $S = 16.155$

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Score: /38



Worksheet 2 - Name: _____

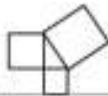
(Answers on 2nd page of PDF)
The theorem states that the square of the hypotenuse is the sum of the squares of the legs. Always understand that the Pythagorean Theorem relates the areas of squares on the sides of the right triangle.

Use the Pythagorean Theorem to find the missing unit.

1.
 $S = 22.136$
2.
 $S = 25.942$
3.
 $S = 21.331$
4.
 $S = 21.817$
5.
 $S = 12$
6.
 $S = 5.196$
7.
 $S = 4.796$
8.
 $S = 19.698$
9.
 $S = 21.331$
10.
 $S = 14.422$

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Score: /38



Worksheet 3 - Name: _____

(Answers on 2nd page of PDF)
The theorem states that the square of the hypotenuse is the sum of the squares of the legs. Always understand that the Pythagorean Theorem relates the areas of squares on the sides of the right triangle.

Use the Pythagorean Theorem to find the missing unit.



$$S = 17.310$$



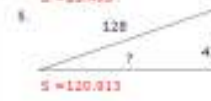
$$S = 101.484$$



$$S = 25.495$$



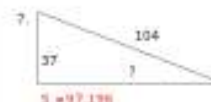
$$S = 81.002$$



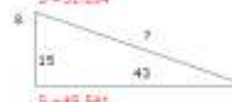
$$S = 120.913$$



$$S = 51.894$$



$$S = 97.198$$



$$S = 45.541$$



$$S = 48.487$$



$$S = 47.539$$

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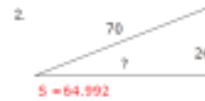
Worksheet 4 - Name: _____

(Answers on 2nd page of PDF)
The theorem states that the square of the hypotenuse is the sum of the squares of the legs. Always understand that the Pythagorean Theorem relates the areas of squares on the sides of the right triangle.

Use the Pythagorean Theorem to find the missing unit.



$$S = 154.729$$



$$S = 64.992$$



$$S = 26.589$$



$$S = 186.655$$



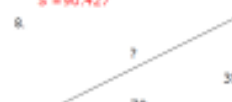
$$S = 196.130$$



$$S = 90.427$$



$$S = 134.503$$



$$S = 78.262$$



$$S = 140.125$$



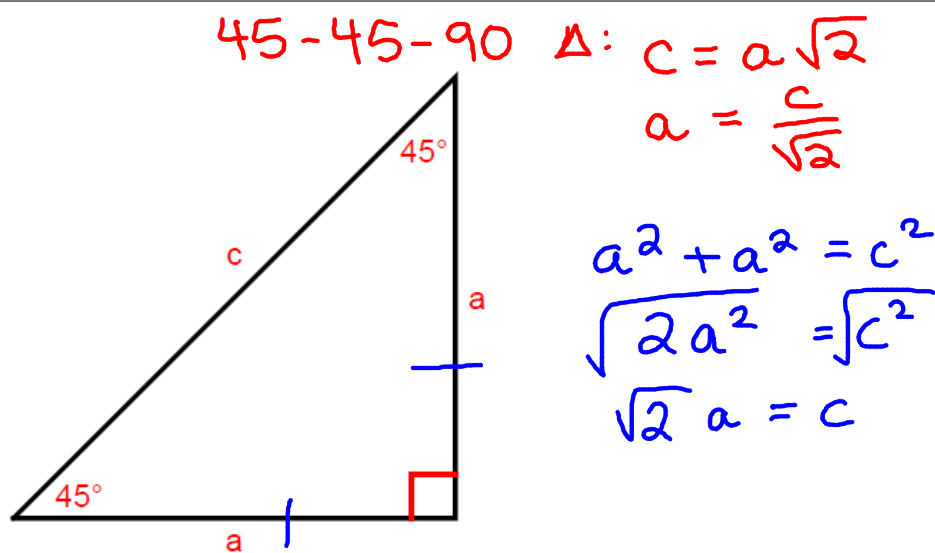
$$S = 65.666$$

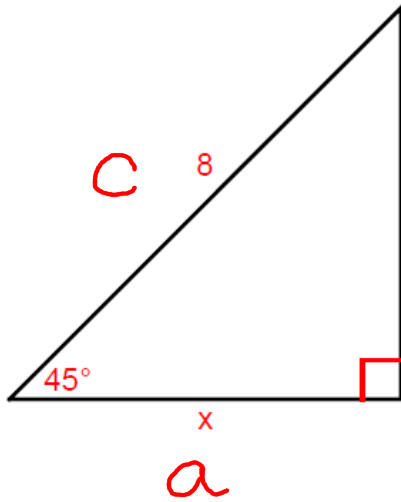
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Special Right Triangles

45°-45°-90° Theorem In a 45°-45°-90° triangle, the hypotenuse is $\sqrt{2}$ times as long as a leg.



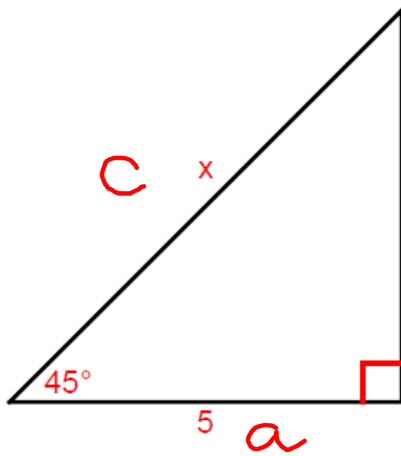


$$a = \frac{c}{\sqrt{2}}$$

$$a = \frac{8}{\sqrt{2}}$$

$$\frac{8}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{8\sqrt{2}}{2}$$

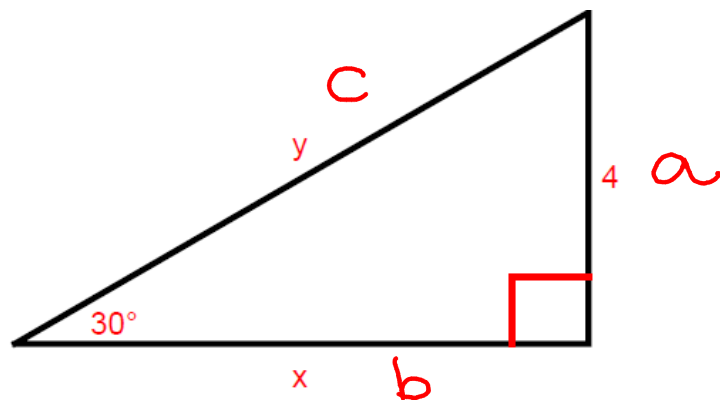
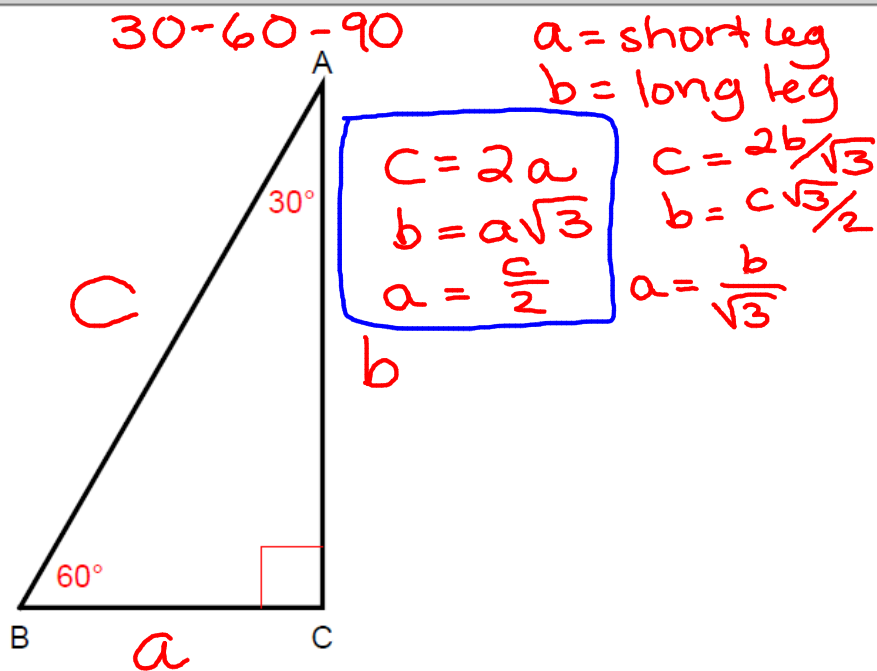
$$= 4\sqrt{2}$$



$$c = a\sqrt{2}$$

$$c = 5\sqrt{2}$$

30°-60°-90° Theorem In a 30°-60°-90° triangle, the hypotenuse is twice as long as the shorter leg, and the longer leg is $\sqrt{3}$ times as long as the shorter leg.



$$4^2 + (4\sqrt{3})^2 = 8^2$$

$$16 + (16 \cdot 3) = 64$$

$$16 + 48 = 64$$

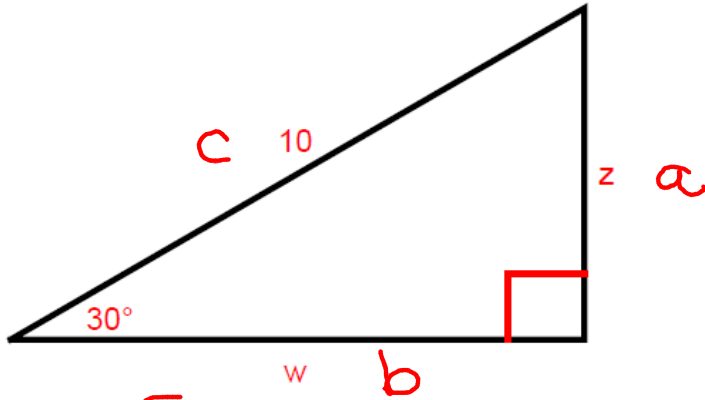
$$b = a\sqrt{3}$$

$$b = 4\sqrt{3}$$

$$c = 2a$$

$$c = 2(4)$$

$$c = 8$$



$$b = \frac{c\sqrt{3}}{2}$$

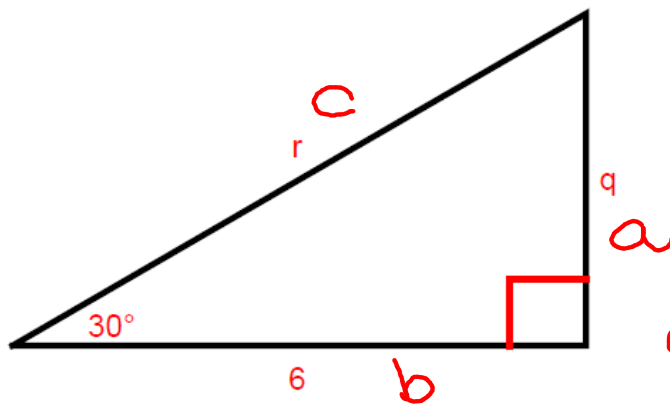
$$b = \frac{10\sqrt{3}}{2} = 5\sqrt{3}$$

$$a = \frac{1}{2}c$$

$$a = \frac{10}{2} = 5$$

$$b = a\sqrt{3}$$

$$b = 5\sqrt{3}$$



$$c = \frac{2b}{\sqrt{3}} = \frac{2 \cdot 6}{\sqrt{3}}$$

$$= \frac{12}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{12\sqrt{3}}{3}$$

$$= 4\sqrt{3}$$

$$a = \frac{b}{\sqrt{3}} = \frac{6}{\sqrt{3}}$$

$$\frac{6}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{6\sqrt{3}}{3}$$

$$a = 2\sqrt{3}$$